

Inter (Part-II) 2021

Physics	Group-I	PAPER: II
Time: 20 Minutes	(OBJECTIVE TYPE)	Marks: 17

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct, fill that circle in front of that question with Marker or Pen ink in the answer-book. Cutting or filling two or more circles will result in zero mark in that question.

1-1- Albert Einstein was awarded Nobel Prize in Physics in:

- (a) 1905 (b) 1911
(c) 1918 (d) 1921 ✓

2- At high frequency, the value of reactance of capacitor will be:

- (a) Small ✓ (b) Zero
(c) Large (d) Infinite

3- The e/m of neutron is:

- (a) Less than electron
(b) Zero ✓
(c) Greater than electron
(d) The same as electron

4- The current gain β of the transistor is given by:

- (a) $\beta = \frac{I_B}{I_C}$ (b) $\beta = I_B + I_C$
(c) $\beta = I_B - I_C$ (d) $\beta = \frac{I_C}{I_B}$

5- When 10 V are applied to an A.C. circuit, the current flowing in it 100 mA, its impedance is:

- (a) 10 Ohm (b) 100 Ohm ✓
(c) 1000 Ohm (d) 1 Ohm

- 6- If the potential difference across two plates of capacitor is doubled, the energy in it will be:
(a) Two times (b) Eight times
(c) Four times ✓ (d) Remains same
- 7- The dead time of G.M. counter is:
(a) 10^{-3} s (b) 10^{-4} s ✓
(c) 10^{-6} s (d) 10^{-8} s
- 8- The energy stored in inductor is:
(a) $\frac{1}{2} LI^2$ ✓ (b) $\frac{1}{2} LI$
(c) $\frac{1}{2} L^2 I$ (d) $\frac{1}{2} L^2 I^2$
- 9- The value of Plank's constant h is:
(a) 6.63×10^{-34} Js ✓
(b) 6.63×10^{-34} J/s
(c) 6.63×10^{-34} Js²
(d) 6.63×10^{-34} J/s²
- 10- The quantity $-\frac{\Delta V}{\Delta r}$ is called:
(a) Electric potential (b) Electric energy
(c) Potential energy (d) Potential gradient ✓
- 11- The critical temperature of mercury is:
(a) 1:18 K (b) 4.2 K ✓
(c) 3.72 K (d) 7.2 K
- 12- Kirchhoff's second rule is a way of stating conservation of:
(a) Mass (b) Charge
(c) Energy ✓ (d) Momentum
- 13- Radius of first Bohr orbit of hydrogen atom is:
(a) 0.053 nm ✓ (b) 0.053 mm
(c) 0.053 μ m (d) 0.053 m

- 14- The input resistance of an operational amplifier is:
- (a) Zero
 - (b) Low
 - (c) High ✓
 - (d) Equal to output resistance
- 15- Gamma rays emitted from radioactive element have speed:
- (a) $1 \times 10^7 \text{ ms}^{-1}$
 - (b) $1 \times 10^8 \text{ ms}^{-1}$
 - (c) $3 \times 10^8 \text{ ms}^{-1}$ ✓
 - (d) $4 \times 10^{19} \text{ ms}^{-1}$
- 16- The unit of self-inductance is:
- (a) Weber
 - (b) Tesla
 - (c) Henry ✓
 - (d) Farad
- 17- The brightness of spot on CRO screen is controlled by:
- (a) Plates
 - (b) Cathode
 - (c) Anode
 - (d) Grid ✓

